PATENT ABSTRACTS OF JAPAN

(11)Publication number :　　　　2003-150995

(43)Date of publication of application : 23.05.2003

(51)Int.Cl.	G07C 1/00
	B42D 15/10
	E05B 49/00
	G06F 17/60
	G06K 17/00

(21)Application number : 2001-346700　　　(71)Applicant : TSUBASA SYSTEM CO LTD

(22)Date of filing :　　　　12.11.2001　　　(72)Inventor :　ABE YOSHIHIRO

(54) AUTOMATIC CONTROL SYSTEM AND METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To control employees and using states of respective devices to be used while improving a security control of a building without necessitating the security of the personnel.

SOLUTION: A host computer 101 having an information processing part and auxiliary storage means is connected to LAN 103. Multiple terminals 104 and 105 are connected to the LAN 103 and readers/writers 104 and 105 for IC cards are also connected thereto. The host computer 101 is connected to a public circuit network 107, using information collecting means 109 for vending machines 110 and 111, elevator control means 112 for elevators 114 and 115, and automatic door control means 117 for automatic doors 118 and 119 respectively. These devices are usable by the IC card and the using states are centrally controlled by communicating recording data between the IC card and the host computer 101.
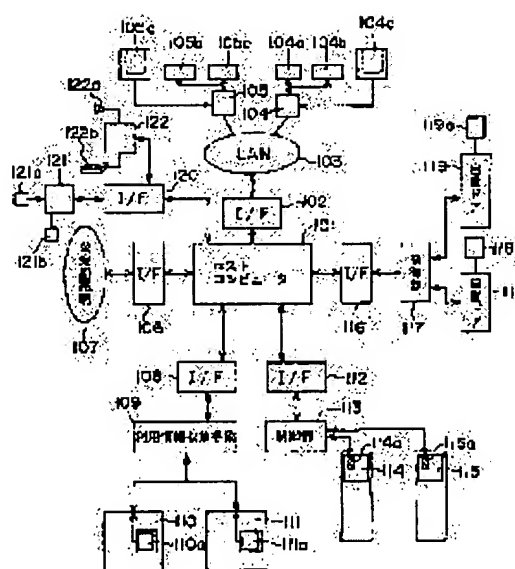
LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of

* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] An automatic management method [enable it / to work the above-mentioned terminal by the host computer which has the information-processing section and a secondary-memory means, and two or more terminals with which the IC card reader was formed being connected to a Local Area Network, reading the record data with which the above-mentioned IC card reader was recorded on the IC card, transmitting the above-mentioned record data to the above-mentioned information-processing section of the above-mentioned host computer, and answering a letter to the above-mentioned terminal in the instruction signal the above-mentioned information-processing section carries out a terminal as operation is possible].
[Claim 2] The automatic management method according to claim 1 which connects the above-mentioned host computer to a public network, and performs telephone communication of the interior of an automatic managerial system, and the exterior through the above-mentioned host computer.
[Claim 3] The automatic management method according to claim 2 which connects telephone to a terminal, performs the communication link using the above-mentioned telephone through the above-mentioned host computer, and makes the above-mentioned telephone usable under the operating status of the above-mentioned terminal.
[Claim 4] The automatic management method according to claim 1 which connects a facsimile transmitter-receiver to a terminal, performs the communication link using the above-mentioned facsimile transmitter-receiver through a host computer, and makes the above-mentioned facsimile transmitter available under the operating status of the above-mentioned terminal.
[Claim 5] The automatic management method according to claim 1 to which the information-processing section of the above-mentioned host computer manages the ON appearance time amount about the user who uses the above-mentioned IC card, office hours, the time of the terminal connected to the above-mentioned host computer, the use start time of the telephone connected to the above-mentioned terminal and end time, the use start time of the facsimile terminal connected to the above-mentioned terminal, use end time, and the count of use of the copying machine connected to the above-mentioned Local Area Network.
[Claim 6] The automatic door control means is connected to the host computer which has the information processing section and a secondary memory means by which the database was stored. The above-mentioned automatic door control means controls an automatic door, and the reading sensor of an IC card is connected to the above-mentioned automatic door. The above-mentioned reading sensor reads the record data of the above-mentioned IC card, and transmits the read above-mentioned record data to the information processing section of the above-mentioned host computer. The above-mentioned information processing section searches the above-mentioned database based on the above-mentioned record data. The automatic management method which the information processing section of the above-mentioned host computer transmits the instruction signal which makes open actuation perform to an automatic door to the above-mentioned automatic door control means, and makes the above-mentioned automatic door carry out open actuation when the above-mentioned record data exist in the above-

h   c   g   cg b   eb cg e e   h   c

mentioned database.

[Claim 7] The automatic management method which controls in the above-mentioned elevator by an elevator control means being connected to the host computer which has the information-processing section and a secondary-memory means to by_which the database was stored, and the above-mentioned elevator control means controlling an elevator elevator, and the reading sensor of the IC card connected to the above-mentioned elevator elevator at the above-mentioned host computer being formed, making the record data of the above-mentioned IC card read by the above-mentioned reading sensor, and transmitting the above-mentioned record data to the above-mentioned host computer.

[Claim 8] An automatic-vending-machine use information gathering means is connected to the host computer which has the information processing section and a secondary memory means. An automatic vending machine is connected to the above-mentioned automatic-vending-machine use information means. In the above-mentioned automatic vending machine In case the user who forms an IC card reader and uses the above-mentioned IC card uses the above-mentioned automatic vending machine By inserting the above-mentioned IC card in the above-mentioned IC card reader, and transmitting the record data recorded on the above-mentioned IC card, and the account data in use of the above-mentioned automatic vending machine to the above-mentioned information processing section of the above-mentioned host computer The automatic management method which manages the accounting accompanying use of the above-mentioned automatic vending machine by the above-mentioned user.

[Claim 9] Claims 1, 6, and 7 on which the information of the user who uses the above-mentioned IC card for the above-mentioned IC card is recorded, or an automatic management method given in eight.

[Claim 10] Claims 1, 6, and 7 which record at least the affiliation code data about the user who uses the above-mentioned IC card for the above-mentioned IC card, department-and-section code data, personnel code data, name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data, or an automatic management method given in eight.

[Claim 11] The host computer which has the information processing section and a secondary memory means is connected to a Local Area Network. Two or more terminals are connected to the above-mentioned Local Area Network, and to each terminal in two or more above-mentioned terminals An IC card reader is connected and the record data with which the above-mentioned IC card reader was recorded on the IC card are read. The automatic managerial system which enables it to work the above-mentioned terminal when the above-mentioned record data are transmitted to the above-mentioned information processing section of the above-mentioned host computer and the above-mentioned information processing section answers the above-mentioned terminal in the instruction signal with which operation of a terminal is permitted.

[Claim 12] The automatic managerial system according to claim 11 which performs telephone communication between the interior of an automatic managerial system, and the exterior through the above-mentioned host computer while the above-mentioned host computer is connected to the public network.

[Claim 13] The automatic managerial system according to claim 12 with which the above-mentioned telephone becomes available while telephone is connected to a terminal, the communication link using the above-mentioned telephone is performed through the above-mentioned host computer and the above-mentioned terminal is working.

[Claim 14] The automatic managerial system according to claim 12 with which the above-mentioned facsimile transmitter becomes available while a facsimile transmitter is connected to a terminal, the communication link using the above-mentioned facsimile transmitter is performed through the above-mentioned host computer and the above-mentioned terminal is working.

[Claim 15] The use start time of the telephone connected to the ON appearance time amount about the user who uses the above-mentioned IC card, office hours, the time of the terminal connected to the above-mentioned host computer, and the above-mentioned terminal by the information-processing section of the above-mentioned host computer and end time, the use start time of the facsimile terminal connected to the above-mentioned terminal, use end time, and the automatic managerial system

h   c   g   cg b   eb cg   e   e   h   c

according to claim 11 that manages the count of use of the copying machine connected to the above-mentioned Local Area Network.

[Claim 16] An automatic door control means is connected to the host computer which has the information processing section and a secondary memory means by which the database was stored. The reading sensor of an IC card is connected to the automatic door controlled by the above-mentioned automatic door control means. Make the record data of the above-mentioned IC card read by the above-mentioned reading sensor, and the above-mentioned record data are transmitted to the information processing section of the above-mentioned host computer. The automatic managerial system to which transmit the instruction signal of open actuation to the above-mentioned automatic door control means from the information processing section of the above-mentioned host computer, and open actuation of the above-mentioned automatic door is made to perform.

[Claim 17] The automatic managerial system which controls the above-mentioned elevator by connecting an elevator control means to the host computer which has the information-processing section and a secondary-memory means, forming the reading sensor of an IC card connected with the above-mentioned host computer in the elevator controlled by the above-mentioned elevator control means, making the record data of the above-mentioned IC card read by the above-mentioned reading sensor, and transmitting the above-mentioned record data to the above-mentioned host computer.

[Claim 18] An automatic-vending-machine use information gathering means is connected to the host computer which has the information processing section and a secondary memory means. An automatic vending machine is connected to the above-mentioned automatic-vending-machine use information means. In the above-mentioned automatic vending machine In case the user who an IC card reader is formed and uses the above-mentioned IC card uses the above-mentioned automatic vending machine The automatic managerial system with which accounting accompanying use of the above-mentioned automatic vending machine is performed by inserting the above-mentioned IC card in the above-mentioned IC card reader, and transmitting the record data recorded on the above-mentioned IC card to the above-mentioned host computer.

[Claim 19] The automatic managerial system according to claim 11, 16, 17, or 18 with which the information of the user who uses the above-mentioned IC card for the above-mentioned IC card is recorded.

[Claim 20] The automatic managerial system according to claim 11, 16, 17, or 18 with which the affiliation code data about the user who uses the above-mentioned IC card for the above-mentioned IC card, department-and-section code data, personnel code data, name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data are recorded at least.

[Translation done.]

h   c   g   cg b   eb cg e e   h   c

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention is applied to diligence-and-indolence management of an employee and facility use management in the firm which carries out especially using an IC card about an automatic managerial system and an automatic management method, and is suitable.
[0002]
[Description of the Prior Art] Conventionally, in diligence-and-indolence management of an employee, the office-going hour, leaving time amount, etc. are recorded using a time card etc., and salary count etc. is performed based on this.
[0003] However, the present condition is that human being who manages the employee is performing the level of skill and the service condition of work of an employee. About a certain employee, when there are much lateness and absence, the so-called affiliation length who manages the employee supervised each people's service situation, and, specifically, has called an employee's attention from affiliation length.
[0004] Moreover, it is usually that affiliation length manages synthetically and an employee's action has caused increase-ization of the business in affiliation length, the pursuer of management business, etc. by this.
[0005] Moreover, when an employee's diligence-and-indolence situation was arranged and salary count etc. was performed, the staff for arranging a diligence-and-indolence situation had to be secured, and there was a problem that costs, such as a labor cost, will start.
[0006]
[Problem(s) to be Solved by the Invention] Furthermore, about buildings, such as a building, even if it was outsiders other than the persons concerned, it could go in and out freely in many cases, and the problem about a security management may have arisen in use of each people's personal computer terminal, a telephone, a facsimile transmitter-receiver, etc., etc.
[0007] And in order to have performed this security management, the guard etc. has been stationed to every place, through the monitor etc., it supervised and the staff always had to be secured [**** / that it is necessary to look out for a suspicious person etc.] too.
[0008] Therefore, the purpose of this invention is to offer the automatic managerial system and automatic management method which can perform management of the employee engaged there, and the use situation of each equipment which that employee uses and management of a busy condition while being able to raise the security management in the building of a firm etc., without needing reservation of a staff.
[0009]
[Means for Solving the Problem] In order to attain the above-mentioned purpose, a terminal answers in the instruction signal with which the record data which the host computer which connected invention of the 1st of this invention to the Local Area Network connected with two or more terminals through the Local Area Network, connected the IC card reader to the terminal, and were recorded on the IC card are

h   c   g   cg b   eb cg e e

read, record data are transmitted to a host computer, and operation of a terminal is permitted, and it enables it to work a terminal.

[0010] Invention of the 2nd of this invention connects an automatic door control means to the host computer with which the database was stored, controls an automatic door, connects the reading sensor of an IC card to an automatic door, makes the record data of an IC card read, transmits record data to the information processing section of the above-mentioned host computer, transmits the instruction signal of open actuation to an automatic door control means, and makes open actuation perform to an automatic door.

[0011] Invention of the 3rd of this invention connects an elevator control means to a host computer, to the elevator elevator controlled by the elevator control means, it forms an IC card reading sensor, makes the record data of an IC card read, transmits record data to a host computer, transmits an instruction signal to an elevator control section from a host computer, and controls an elevator elevator.

[0012] Invention of the 4th of this invention connects an automatic-vending-machine use information-gathering means to a host computer, connects an automatic vending machine to an automatic-vending-machine use information means, forms the IC card reader equipment of a card inserting type in an automatic vending machine, in case it uses an automatic vending machine, it inserts an IC card in an IC card reader, it transmits the record data recorded on the IC card to a host computer, specifies a user, and performs the accounting accompanying use of an automatic vending machine.

[0013] By transmitting the record data of an IC card to a host computer, and trying managing intensively the user who carried the IC card according to the automatic managerial system and automatic management method which were constituted as mentioned above, as those who enter into a building are made to carry an IC card, it is automatic and a host computer enables action in these persons' building to manage collectively.

[0014]
[Embodiment of the Invention] Hereafter, it explains, referring to a drawing about the operation gestalt of this invention. In addition, in the complete diagram of the following operation gestalten, the sign identically same into a corresponding part is attached.

[0015] First, the automatic managerial system by 1 operation gestalt of this invention is explained. The top view of the IC card used for the automatic managerial system by this 1 operation gestalt at drawing 1 A is shown, and the cross section met on the B-B line of drawing 1 A at drawing 1 B is shown.

[0016] As shown in drawing 1 A, the noncontact IC card 10 used for the automatic managerial system by this invention has the configuration by which the closure was carried out by covering a substrate 11 with plastic resin etc. and hardening it.

[0017] Various patterns are printed on the substrate 11 and antenna coil 12 is arranged at the curled form at the periphery. Moreover, the IC section 13 in which the circuit required for the center section of this antenna coil 12 in order that IC card 10 of a non-contact mold may attain the various purposes was built, the various electronic parts 14, such as resistance, a capacitor, and a radiator, and the cell 15 as a power source are arranged.

[0018] These component parts are mounted on the substrate 11. Moreover, the perimeter of a base 11 is covered with the closure resin 16 made from plastics, and is hardened. The body 17 of a card of IC card 10 is constituted by this. And the sheet-like seal 18 with which desired printing was performed is stuck on the front rear face in the body 17 of a card, and IC card 10 is constituted.

[0019] above -- constituting -- having had -- non-contact -- a mold -- an IC card -- ten -- 4.91 -- MHz -- two -- phases -- a sine wave -- having used -- 90 -- degree -- about -- a phase -- a modulation (PSK) -- a method -- a modulation circuit -- and -- a coil -- a drive -- a circuit -- from -- constituting -- having had -- a reader -- a writer -- equipment (ISO-10536 specification) -- read-out -- possible -- and -- writing -- possible -- constituting -- having -- ****. In addition, in the managerial system by this 1 operation gestalt, the case where the reader writer equipment of a non-contact mold and the so-called IC card sensor are used, and the reader writer equipment used inserting in a predetermined slot may be used.

[0020] An example of the circuitry of this reader writer equipment 20 and IC card 10 is shown in drawing 2 . That is, as shown in drawing 2 , reader writer equipment consists of the power sending

h   c   g   cg b   eb cg e e

circuit 22 which transmits power to IC card 10 through antenna coil 21, a modulation demodulator circuit 23 for performing an exchange of IC card 10 and record data through antenna coil 21, and a read/write control circuit 24 for controlling an exchange of this record data.

[0021] And in these IC cards 10 and reader writer equipment 20, while transmitting power with antenna coil, data transfer is performed using a phase-modulation signal.

[0022] Therefore, while an employee etc. always carries IC card 10, by installing reader writer equipment 20 in a position, between IC card 10 and reader writer equipment 20, a record data transfer is performed and it can communicate mutually.

[0023] And this mutual communication link enables it to write record data in the IC section 13 of IC card 10, or to read record data to reader writer equipment 20 from the IC section 13 from reader writer equipment 20.

[0024] Moreover, in this 1 operation gestalt, each data item of personnel code data (personnel CD), affiliation code data (affiliation CD), department-and-section code data (department and section CD), name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data is memorized by the IC section 13 of IC card 10 as record data.

[0025] In addition, if it is information data which are not limited to the information data mentioned here as record data, and can specify an employee etc. individually, adopting as record data is possible.

[0026] Next, the automatic managerial system by this 1 operation gestalt which has above-mentioned IC card 10 and above-mentioned reader writer equipment 20 is explained. The block configuration of this automatic managerial system is shown in drawing 3 .

[0027] As shown in drawing 3 , in the automatic managerial system 100 by this 1 operation gestalt, the host computer 101 is connected to Local Area Network (LAN) 103 through the input/output interface 102.

[0028] Two or more terminal units 104,105 are connected to LAN103. Telephones 104a and 105a, the facsimile transmitter-receivers 104b and 105b, and the reader writer equipments 104c and 105c of IC card 10 are connected to these terminal units 104,105.

[0029] The slot (not shown) which can insert IC card 10 is prepared in the reader writer equipments 104c and 105c of these, and it is constituted by inserting IC card 10 in this slot possible [read-out of the record data recorded on IC card 10].

[0030] Moreover, the host computer 101 is connected to the public networks 107, such as the telephone line, through the interface 106 of USB, RS232C, or IEEE1394.

[0031] And Telephones 104a and 105a and the facsimile transmitter-receivers 104b and 105b which were connected to the terminal unit 104,105 are connected to the external public network 107 through LAN103 and a host computer 101 one by one. Thus, by minding a host computer 101 in the middle of a communicative path, use situations, such as use start time in Telephones 104a and 105a or the facsimile transmitter-receivers 104b and 105b and use end time, and utilization time computed from these, are managed with a host computer 101, and it becomes possible to total.

[0032] Moreover, as for the host computer 101, the automatic-vending-machine use information gathering means 109 is connected through the input/output interface 108. Moreover, the control section (neither is illustrated) in two or more automatic vending machines 110,111 is connected to this automatic-vending-machine use information gathering means 109. Moreover, the reader writer equipments 110a and 111a of IC card 10 are formed in each automatic vending machine 110,111, respectively.

[0033] The slot (neither is illustrated) which can insert IC card 10 is prepared in these reader writer equipments 110a and 111a. And it is constituted by inserting IC card 10 in this slot possible [read-out of the record data recorded on IC card 10]. Moreover, each reader writer equipment 110a and 111a is constituted always possible [transmission and reception] with the host computer 101, respectively.

[0034] And in case an automatic vending machine 110,111 is used, the record data recorded on IC card 10 are first read by inserting IC card 10 in an above-mentioned slot. A host computer 101 and IC card 10 will transmit and receive record data through the reader writer equipments 110a and 111a, and are

h   c   g   cg b   eb cg e e

constituted after reading of this record data possible [activation of the accounting of the purchase price accompanying the purchase of the goods in an automatic vending machine 110,111].

[0035] Moreover, the elevator control means 113 is connected to the host computer 101 through the input/output interface 112. It connects with the drive circuit (neither is illustrated) of the elevator elevator 114,115, and the elevator control means 113 is constituted controllable in rise-and-fall actuation of the elevator elevator 114,115.

[0036] Moreover, while the IC card sensors 114a and 115a are installed in each elevator elevator 114,115, the same IC card sensor (not shown) is installed in the closing motion door of each story which gets on and off the elevator elevator 114,115.

[0037] The IC card sensor (not shown) installed in these IC card sensors 114a and 115a and the closing motion door of the elevator of each story is constituted so that record data can be communicated by IC card 10 and non-contact.

[0038] That is, a communication link non-contact between IC card 10 and the IC card sensors 114a and 115a and between IC card 10 and the IC card sensors near the closing motion door is performed only by the user who carried IC card 10 getting on and off to the elevator elevator 114,115.

[0039] It is the phase where the employee who carried IC card 10 specifically rode on the elevator elevator 114, and a communication link is first performed between IC cards 10 and IC card sensor 114a which the employee is carrying. And the record data of this user's IC card 10 are transmitted to a host computer 101. It enables this to manage the information of the user who is on the elevator elevator 114,115 with a host computer 101.

[0040] Moreover, the automatic door control means 117 is connected to the host computer 101 through the input/output interface 116. It connects with the drive circuit (neither is illustrated) of the automatic door 118,119 opened and closed prepared for the receipts and payments to the room, and the automatic door control means 117 is constituted controllable in the switching action of an automatic door 118,119.

[0041] Moreover, in each automatic door 118,119, the IC card sensors 118a and 119a are installed, and it constitutes record data from IC card 10 and non-contact possible [a communication link].

[0042] The employee who carried IC card 10 only specifically approaches in front of an automatic door 118, a communication link non-contact between IC card 10 and IC card sensor 118a is performed, and the record data of this employee's IC card 10 are transmitted to a host computer 101.

[0043] Then, the instruction signal of open actuation is transmitted to the automatic door control means 117 from a host computer 101. If the automatic door control means 117 receives this instruction signal, the instruction signal of open actuation is further transmitted to the drive circuit of an automatic door 118 by the automatic door control means 117, and an automatic door 118 can open.

[0044] Thus, by trying reading record data from an automatic door 118,119 with a host computer 101, it becomes possible to manage the user information on IC card 10 that the automatic door 118 was passed, with a host computer 101.

[0045] Moreover, the automatic reception system 121 and automatic entrance-into-a-room authorization equipment 122 are connected to the host computer 101 through the input/output interface 120.

[0046] The automatic reception system 121 is for publishing IC card 10 with the authority for coming into the building (henceforth, management building) managed by this automatic managerial system 100 to the employee who is not carrying IC card 10.

[0047] This automatic reception system 121 has fingerprint reader 121a and license reader 121b, and is constituted. And ready-for-sending ability constitutes fingerprint image information data and license number data from these fingerprint reader 121a and license reader 121b to the host computer 101, respectively.

[0048] And the information processing section of a host computer 101 performs database retrieval application installed. The information processing section can search the IC card user database mentioned later based on fingerprint image information data and license number data which were received by this activation, and the data file containing the data corresponding to these fingerprint image information data or license number data can be ****(ed).

[0049] Moreover, automatic entrance-into-a-room authorization equipment 122 is for publishing IC card

h   c   g   cg b   eb cg   e   e

10 with authority to the visitor person who receives the person in charge engaged in a management building. And it is constituted possible [issue of IC card 10 for visitor persons] by operating this automatic entrance-into-a-room authorization equipment 122 from the terminal unit 104,105 which an employee uses.

[0050] In this automatic entrance-into-a-room authorization equipment 122, image pick-up equipment 122a and head set 122b are prepared. And a visitor person is photoed by image pick-up equipment 122a, image pick-up data are created, this image pick-up data is transmitted to a host computer 101, and it transmits to the terminal unit of the person in charge who receives further. The person in charge who receives is specified when a visitor person contacts a person in charge using head set 122b.

[0051] And when the transmitted image data is displayed on a terminal unit and a person in charge looks at this, the visitor person in front of the door checks that he is the partner who surely gave the person in charge a convention. In the phase whose the check of this was completed, a person in charge transmits information to automatic entrance-into-a-room authorization equipment 122 by operating a terminal unit 104,105, and issue of IC card 10 is performed here.

[0052] Moreover, the block diagram of the system configuration of the host computer 101 mentioned above is shown in drawing 4 . As shown in drawing 4 , in the host computer 101 by this 1 operation gestalt, it has the secondary memory means 203 recorded on a bus 201 by electromagnetic operation of the information processing section 202 which has CPU(arithmetic-and-program-control, Central Processing Unit)202a and memory 202b centering on this CPU202a, a hard disk (HD), etc. In addition, a bus 201 is for performing a data transfer between each circuit connected by this.

[0053] Moreover, software, such as an operating system which is a program for making a host computer 101 perform predetermined processing, and a facsimile communications program, a telephone communications program mentioned later, is installed in the secondary memory means 203.

[0054] And in case processing according to such software is performed, memory 202b of the information processing section 202 memorizes, and it once performs from CPU202a. Moreover, the information data of the user of IC card 10 are stored in this secondary memory means 203 as an IC card user database 204.

[0055] Here, the IC card user database 204 stored in the secondary memory means 203 of this host computer 101 is explained. The data of the IC card user database 204 by this 1 operation gestalt are shown in drawing 5 .

[0056] As shown in drawing 5 , each data file 300 of the IC card user database 204 is matched with each user for every user of IC card 10. Moreover, these data files 300 are sorted by for example, the personnel CD, and are stored in the secondary memory means 203 of a host computer 101.

[0057] The item CD as the record data memorized by the IC section 13 of IC card 10 with these same data files 300, i.e., personnel, Affiliation CD, department and section CD, name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data are recorded.

[0058] Moreover, in addition to above-mentioned record data, the ON appearance time of day to the building of the user of IC card 10, office hours and the beginning-of-using time of day of a terminal unit 104, use end time, a time, the operating condition of telephone 104a, the operating condition of facsimile transmitter-receiver 104b, the use situation of a copying machine, the total amount of accounting accompanying use of an automatic vending machine, etc. are recorded on these data files 300.

[0059] Moreover, as shown in drawing 4 , in a host computer 101, the database retrieval application installed in the secondary memory means 203 is always started, and the information processing section 202 can always search now the IC card user database 204.

[0060] Moreover, in the host computer 101, the IC card data receiving agent installed in the secondary memory means 203 is always started. And the information processing section 202 is constituted by performing this receiving agent and database retrieval application possible [a comparison of the record data of IC card 10, and the data file 300 of the IC card user database 204].

[0061] Moreover, while the display means 205 is connected, the input means 206 which consists of

h   c   g   cg   b   eb cg e e

pointing devices, such as a keyboard and a mouse (neither is illustrated), etc. is connected to the bus 201.

[0062] Furthermore, the bus 201 in this host computer 101 is connected to Local Area Network (LAN) 103 shown in drawing 3 through the input/output interface 102. Similarly, the bus 201 is connected to the public network 107 shown in drawing 3 through the interface of USB, RS232C, or IEEE1394.

[0063] Moreover, the bus 201 is connected to the automatic-vending-machine use information gathering means 109, the elevator control means 113, and the automatic door control means 117 through each input/output interface 108,112,116, respectively. Thereby, these automatic-vending-machine use information gathering means 109, the elevator control means 113, and the automatic door control means 117 constitute the instruction signal from the information processing section 202 at ready-for-sending ability.

[0064] The automatic managerial system 100 according to this 1 operation gestalt as mentioned above is constituted. And it is constituted so that the employee who carried IC card 10 in the management building where management by this automatic managerial system 100 is performed can always be managed.

[0065] Next, the management method by the automatic managerial system 100 constituted as mentioned above is explained, giving an example.

[0066] That is, if the employee who carried IC card 10 by this 1 operation gestalt comes to office, it will approach first in front of the automatic door 118 prepared in the door of a firm. At this time, the record data of an employee's IC card 10 are read by IC card sensor 118a of an automatic door 118.

[0067] IC card sensor 118a which read record data transmits record data to a host computer 101. Thereby, the information processing section 202 of a host computer 101 receives and recognizes the record data of IC card 10 of the employee who approached in front of the automatic door 118 of the door.

[0068] Then, the information processing section 202 searches whether according to the database retrieval application currently performed, the data file 300 corresponding to the received record data exists.

[0069] When the data file 300 which agrees to the received record data as a result of this retrieval exists, the information processing section 202 records the time of day when the record data of this employee's IC card 10 were read by IC card sensor 118a at, and were transmitted to the information processing section 202 on the item of the entrance time of day of the data file 300 corresponding to this employee. This becomes possible to record the ingress time of day into an employee's management building.

[0070] Moreover, the information processing section 202 of a host computer 101 transmits the instruction signal which directs open actuation of an automatic door 118 to the automatic door control means 117 by one side.

[0071] The automatic door control means 117 which received the instruction signal which directs open actuation of an automatic door 118 transmits the instruction signal of open actuation to the mechanical component of an automatic door 118. The employee who the automatic door 118 could open and carried IC card 10 by this can pass through this door.

[0072] On the other hand, when the corresponding data file 300 does not exist as a result of retrieval of the IC card user database 204, the instruction signal which maintains a closed state from the information processing section 202 of a host computer 101 is transmitted to the automatic door 118 of the door. It can prevent that those who are not recorded on the IC card user database 204 enter into a management building by this.

[0073] Moreover, even if it approaches the door about those (non-carried person) who are not carrying IC card 10, IC card sensor 118a cannot read IC card 10. Therefore, since record data etc. are not transmitted to a host computer 101, the instruction signal of open actuation is not transmitted to the automatic door control means 117 from the information processing section 202 of a host computer 101. Since an automatic door 118 is not opened by this, the ingress into the building of the non-carried person of IC card 10 is prevented.

[0074] In addition, in spite of having the authority to enter into a building, originally, IC card 10 with

h   c   g   cg b   eb cg   e   e

authority is published by the automatic reception system 121 installed in the door for the reason of leaving IC card 10 in a house in the employee who does not get ingress into a building.

[0075] That is, a non-carried person makes fingerprint reader 121a or license reader 121b prepared in the automatic reception system 121 read an own fingerprint or an own license. And this image data and license number data of a fingerprint that were read are transmitted to the information processing section 202 of a host computer 101.

[0076] The information processing section 202 which received these data **** the data file 300 whose item of this fingerprint image data or license number data corresponds from the IC card user database 204, and transmits to the automatic reception system 121.

[0077] The automatic reception system 121 which received the data file 300 builds the flag which sets up duration of service while writing the data of the part applicable to the individual humanity news of this data file 300 in new IC card 10.

[0078] That is, after the period (for example, 24 hours) which set up this IC card 10 in distinction from IC card 10 of other normal passes, it is entirely made unusable. Thus, the unauthorized use of IC card 10 can be prevented by making IC card 10 unusable after fixed period progress.

[0079] Then, when the employee who carried IC card 10 enters into a building, this employee uses an elevator and this employee approaches the closing motion door of an elevator, the information in an IC card is read by the IC card sensors 114a and 115a formed near the closing motion door of an elevator. And the record data of this IC card 10 are transmitted to the information processing section 202 of a host computer 101.

[0080] The information processing section 202 of a host computer 101 which received record data transmits the information data of the story in which this employee is to the elevator control means 113. The elevator control means 113 moves this information data with reception to the story in which an employee's elevator elevator 114 is, and opens a closing motion door.

[0081] And the information processing section 202 of a host computer 101 **** the data file 300 which is in agreement with the record data which searched the IC card user database 204 and were received in the phase in which this employee got in the elevator elevator 114.

[0082] Then, you extract "Affiliation CD" and "department and section CD" from the ****(ed) data file 300, make it go up and down an elevator, it is made to stop on the story of the department and section to which the employee who showed up in this elevator belongs, and a closing motion door is opened.

[0083] In addition, when other employees have got into [the elevator elevator 114] in the phase in which this employee got in, the information processing section 202 of a host computer 101 extracts the "executive priority" of a data file 300 further. And the information processing section 202 judges synthetically "Affiliation CD", "department and section CD", and "executive priority" about all the employees that have boarded into the elevator elevator 114.

[0084] By this decision, I stop by the rank of the high order of priority, or it announces it that I have the low person of priority get down in the case of no vacancy "to get down, since it is Mr. OO and no vacancy" etc.

[0085] In addition, when the employee who got in the elevator elevator 114 wants to get down on stories other than a story with the department and section to which he belongs, a stopped rank is transmitted by [to which a menu screen key and a ten key operate it, for example] having been added to the cellular phone. The data of this halt rank are transmitted to the information processing section 202 of a host computer 101 through the public network 107.

[0086] The information processing section 202 which received this halt rank transmits the data of halt rank to the elevator control means 113, and stops the elevator elevator 114 in this halt rank.

[0087] After the employee who got in the elevator elevator 114 gets down from the elevator elevator 114 on a story with the department and section to which he belongs, or a desired story, the room of affiliation department and section is entered. Then, this employee inserts IC card 10 in the slot of reader writer equipment 104c prepared in the terminal unit 104 on its own desk.

[0088] After IC card 10 is inserted in a slot, the record data of IC card 10 are read by reader writer equipment 104c, and it is transmitted to the information processing section 202 of a host computer 101.

h   c   g   cg b   eb cg e e

[0089] The information processing section 202 which received record data **** the data file 300 applicable to the record data of this IC card 10 from the IC card user database 204.

[0090] And the information processing section 202 judges whether the pocket person of this IC card 10 has use authority about the terminal unit 104 with which this reader writer equipment 104c is attached.

[0091] When the pocket person of this IC card 10 does not have use authority as a result of this decision, it is made not to transmit all instruction signals towards reader writer equipment 104c of a terminal unit 104. By not transmitting this instruction signal, the employee who a terminal unit 104 will be in the condition that it cannot be made to start, and does not have authority can prevent using the predetermined terminal unit 104.

[0092] On the other hand, when there is use authority, while transmitting the instruction signal which directs starting **** to reader writer equipment 104c which read record data, the time of day which started the terminal unit 104 is recorded on the item of the terminal beginning-of-using time of day of this ****(ed) data file 300.

[0093] Reader writer equipment 104c which received the instruction signal turns on a terminal unit 104, telephone 104a, and facsimile transmitter-receiver 104b, and makes these an usable condition. Then, when an employee starts a terminal unit 104, this employee becomes usable about a terminal unit 104.

[0094] Moreover, when using telephone 104a and facsimile transmitter-receiver 104b, message start time and message end time are recorded on the item of the "telephone use situation" of a data file 300, and a "facsimile terminal use situation" by the information processing section 202 of a host computer 101 with the usual telephone or use of a facsimile terminal.

[0095] Moreover, in case a copying machine is used, by inserting IC card 10 in the reader writer equipment of a copying machine, a copying machine will be in an available condition and the use time of day of the copying machine of the employee who is carrying IC card 10 will be similarly recorded on this employee's data file 300 in further above-mentioned telephone 104a or facsimile transmitter-receiver 104b.

[0096] Moreover, when this employee purchases a can drink etc. using the automatic vending machine 110 in a management building, IC card 10 is first inserted in the slot of reader writer equipment 110a in which it was prepared by the automatic vending machine 110. Then, this employee purchases desired goods. With this, the record data and use amount-of-money data of IC card 10 are transmitted to the automatic-vending-machine use information gathering means 109.

[0097] Then, these record data and use amount-of-money data are transmitted to the information processing section 202 of a host computer 101 from this automatic-vending-machine use information gathering means 109. The information processing section 202 which received these data **** the data file 300 which corresponds from the IC card user database 204, and records the new amount-of-money data which added use amount-of-money data to the amount-of-money data in the item of the "automatic-vending-machine use amount of money" in this data file 300.

[0098] In addition, the amount-of-money data in the item of this "automatic-vending-machine use amount of money" are continuously added through the count period of a salary, are used for salary count in the phase which the count period of a salary passed, and are again added from 0 after that.

[0099] Moreover, when an employee comes from a management building outside, the automatic door 118 of the door etc. is passed. At this time, the time of day when leaving is recorded on the "leaving time of day" of an employee's data file 300 when the IC card user database 204 corresponds like the case where it enters into the management building mentioned above. Then, when this employee enters into a management building again, the time of day which entered the "entrance time of day" of a data file 300 is recorded similarly.

[0100] And such "entrance time of day" and "leaving time of day", and current time of day are always calculated by the information processing section 202 of a host computer 101, and the mail which requires the publication of a going-out statement of reasons etc. is transmitted if needed.

[0101] It is the phase which carried out predetermined time progress from "leaving time of day", for example, the phase which passed 60 minutes or more, and when "entrance time of day" is not recorded on an employee's data file 300, specifically, the information processing section 202 of a host computer

h   c   g   cg b   eb cg e e

101 presumes the employee "went out."

[0102] If "going out" is presumed by the information processing section 202, the information processing section 202 of a host computer 101 will transmit the electronic mail to which the publication of a statement of reasons is urged to the terminal unit 104 of this corresponding employee. And management of predetermined diligence and indolence is judged by the reply result of a next electronic mail.

[0103] Moreover, about going home of an employee, all the cases where it is recorded at the "leaving time of day" of an employee's data file after 5:30 p.m. are presumed to be going home in the information processing section 202 of a host computer 101. and the phase where predetermined time passed in leaving after 5:30 p.m. -- for example, even if it passes for 60 minutes, it is made not to transmit an electronic mail

[0104] In addition, when the time of day which entered a room again and entered "entrance time of day" is recorded after the time of day which the employee left after 5:30 p.m. and left at the "leaving time of day" of an employee's data file 300 was recorded, let the latest time of the leaving time of day recorded after this entrance time of day be leaving time of day.

[0105] As mentioned above, the information processing section 202 of a host computer 101 enables it to manage diligence-and-indolence management of an employee at any time by recording "entrance time of day" and "leaving time of day" on an employee's data file 300 timely.

[0106] That is, the information processing section 202 of a host computer 101 enables it to provide with such diligence-and-indolence information the terminal unit 105 of the affiliation length of department and section with which this employee belongs from the information processing section 202 of a host computer 101 at any time, when overtime work is likely to be against Labor Standard Law mostly, or when there are much lateness and absence. By this, affiliation length becomes possible [reducing sharply the effort which management of an employee takes].

[0107] Moreover, it is also possible to add further the so-called skill information, such as an experience type of industry about an employee individual, devotion business and the years of experience of these work, and devotion years, to the record data of IC card 10 and the data file 300 of the IC card user database 204.

[0108] Thus, in a certain department and section, it is urgent by adding skill information to IC card 10, and when a staff is needed, it becomes possible by retrieving such skill information to elect an auxiliary staff easily.

[0109] Automatic management using the automatic managerial system according to this 1 operation gestalt as mentioned above is performed.

[0110] As mentioned above, although 1 operation gestalt of this invention was explained concretely, this invention is not limited to 1 above-mentioned operation gestalt, and various kinds of deformation based on the technical thought of this invention is possible for it.

[0111] For example, it may not pass over the item of the data file mentioned in 1 above-mentioned operation gestalt, the item of skill information, and the whole automatic managerial system configuration for an example to the last, but the item of a data file different if needed from this, the item of skill information, and the whole automatic managerial system configuration may be used.

[0112]

[Effect of the Invention] The user who according to this invention carries an IC card and goes in and out in a building as explained above, Accounting accompanying the use situation of a facility of telephone, a facsimile terminal, etc., an elevator, the operating condition of an automatic door, and use of an automatic vending machine by having managed unitary with the host computer While being able to raise the security management in the building of a firm etc., without needing reservation of a staff, the busy condition of each equipment which management of the employee engaged there and its employee use is manageable.

[Translation done.]

h   c   g   cg b   eb cg e e

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention] This invention is applied to diligence-and-indolence management of an employee and facility use management in the firm which carries out especially using an IC card about an automatic managerial system and an automatic management method, and is suitable.

[Translation done.]

h   c   g   cg b   eb cg e   e

* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art] Conventionally, in diligence-and-indolence management of an employee, the office-going hour, leaving time amount, etc. are recorded using a time card etc., and salary count etc. is performed based on this.
[0003] However, the present condition is that human being who manages the employee is performing the level of skill and the service condition of work of an employee. About a certain employee, when there are much lateness and absence, the so-called affiliation length who manages the employee supervised each people's service situation, and, specifically, has called an employee's attention from affiliation length.
[0004] Moreover, it is usually that affiliation length manages synthetically and an employee's action has caused increase-ization of the business in affiliation length, the pursuer of management business, etc. by this.
[0005] Moreover, when an employee's diligence-and-indolence situation was arranged and salary count etc. was performed, the staff for arranging a diligence-and-indolence situation had to be secured, and there was a problem that costs, such as a labor cost, will start.

[Translation done.]

h   c   g   cg b   eb cg e e

* NOTICES *

JPO and NCIPI are not responsible for any
damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention] As explained above, in this invention, accounting accompanying the use situation of a facility of a telephone, a facsimile terminal, etc. of the user who carries an IC card and goes in and out in a building, an elevator, the operating condition of an automatic door, and use of an automatic vending machine is managed unitary with the host computer. Therefore, while being able to raise the security management in the building of a firm etc., without needing reservation of a staff, the busy condition of each equipment which management of the employee engaged there and its employee use is manageable.

[Translation done.]

h   c   g   cg b   eb cg e e

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Furthermore, about buildings, such as a building, even if it was outsiders other than the persons concerned, it could go in and out freely in many cases, and the problem about a security management may have arisen in use of each people's personal computer terminal, a telephone, a facsimile transmitter-receiver, etc., etc.

[0007] And in order to have performed this security management, the guard etc. has been stationed to every place, through the monitor etc., it supervised and the staff always had to be secured [**** / that it is necessary to look out for a suspicious person etc.] too.

[0008] Therefore, the purpose of this invention is to offer the automatic managerial system and automatic management method which can perform management of the employee engaged there, and the use situation of each equipment which that employee uses and management of a busy condition while being able to raise the security management in the building of a firm etc., without needing reservation of a staff.

[Translation done.]

h   c   g   cg b   eb cg e e

* NOTICES *

```
JPO and NCIPI are not responsible for any
damages caused by the use of this translation.
```

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, a terminal answers in the instruction signal with which the record data which the host computer which connected invention of the 1st of this invention to the Local Area Network connected with two or more terminals through the Local Area Network, connected the IC card reader to the terminal, and were recorded on the IC card are read, record data are transmitted to a host computer, and operation of a terminal is permitted, and it enables it to work a terminal.

[0010] Invention of the 2nd of this invention connects an automatic door control means to the host computer with which the database was stored, controls an automatic door, connects the reading sensor of an IC card to an automatic door, makes the record data of an IC card read, transmits record data to the information processing section of the above-mentioned host computer, transmits the instruction signal of open actuation to an automatic door control means, and makes open actuation perform to an automatic door.

[0011] Invention of the 3rd of this invention connects an elevator control means to a host computer, to the elevator elevator controlled by the elevator control means, it forms an IC card reading sensor, makes the record data of an IC card read, transmits record data to a host computer, transmits an instruction signal to an elevator control section from a host computer, and controls an elevator elevator.

[0012] Invention of the 4th of this invention connects an automatic-vending-machine use information-gathering means to a host computer, connects an automatic vending machine to an automatic-vending-machine use information means, forms the IC card reader equipment of a card inserting type in an automatic vending machine, in case it uses an automatic vending machine, it inserts an IC card in an IC card reader, it transmits the record data recorded on the IC card to a host computer, specifies a user, and performs the accounting accompanying use of an automatic vending machine.

[0013] By transmitting the record data of an IC card to a host computer, and trying managing intensively the user who carried the IC card according to the automatic managerial system and automatic management method which were constituted as mentioned above, as those who enter into a building are made to carry an IC card, it is automatic and a host computer enables action in these persons' building to manage collectively.

[0014]
[Embodiment of the Invention] Hereafter, it explains, referring to a drawing about the operation gestalt of this invention. In addition, in the complete diagram of the following operation gestalten, the sign identically same into a corresponding part is attached.

[0015] First, the automatic managerial system by 1 operation gestalt of this invention is explained. The top view of the IC card used for the automatic managerial system by this 1 operation gestalt at drawing 1 A is shown, and the cross section met on the B-B line of drawing 1 A at drawing 1 B is shown.

[0016] As shown in drawing 1 A, the noncontact IC card 10 used for the automatic managerial system by this invention has the configuration by which the closure was carried out by covering a substrate 11 with plastic resin etc. and hardening it.

[0017] Various patterns are printed on the substrate 11 and antenna coil 12 is arranged at the curled form

h   c   g   cg b   eb cg e e

at the periphery. Moreover, the IC section 13 in which the circuit required for the center section of this antenna coil 12 in order that IC card 10 of a non-contact mold may attain the various purposes was built, the various electronic parts 14, such as resistance, a capacitor, and a radiator, and the cell 15 as a power source are arranged.

[0018] These component parts are mounted on the substrate 11. Moreover, the perimeter of a base 11 is covered with the closure resin 16 made from plastics, and is hardened. The body 17 of a card of IC card 10 is constituted by this. And the sheet-like seal 18 with which desired printing was performed is stuck on the front rear face in the body 17 of a card, and IC card 10 is constituted.

[0019] above -- constituting -- having had -- non-contact -- a mold -- an IC card -- ten -- 4.91 -- MHz -- two -- phases -- a sine wave -- having used -- 90 -- degree -- about -- a phase -- a modulation (PSK) -- a method -- a modulation circuit -- and -- a coil -- a drive -- a circuit -- from -- constituting -- having had -- a reader -- a writer -- equipment (ISO-10536 specification) -- read-out -- possible -- and -- writing -- possible -- constituting -- having -- **** . In addition, in the managerial system by this 1 operation gestalt, the case where the reader writer equipment of a non-contact mold and the so-called IC card sensor are used, and the reader writer equipment used inserting in a predetermined slot may be used.

[0020] An example of the circuitry of this reader writer equipment 20 and IC card 10 is shown in drawing 2 . That is, as shown in drawing 2 , reader writer equipment consists of the power sending circuit 22 which transmits power to IC card 10 through antenna coil 21, a modulation demodulator circuit 23 for performing an exchange of IC card 10 and record data through antenna coil 21, and a read/write control circuit 24 for controlling an exchange of this record data.

[0021] And in these IC cards 10 and reader writer equipment 20, while transmitting power with antenna coil, data transfer is performed using a phase-modulation signal.

[0022] Therefore, while an employee etc. always carries IC card 10, by installing reader writer equipment 20 in a position, between IC card 10 and reader writer equipment 20, a record data transfer is performed and it can communicate mutually.

[0023] And this mutual communication link enables it to write record data in the IC section 13 of IC card 10, or to read record data to reader writer equipment 20 from the IC section 13 from reader writer equipment 20.

[0024] Moreover, in this 1 operation gestalt, each data item of personnel code data (personnel CD), affiliation code data (affiliation CD), department-and-section code data (department and section CD), name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data is memorized by the IC section 13 of IC card 10 as record data.

[0025] In addition, if it is information data which are not limited to the information data mentioned here as record data, and can specify an employee etc. individually, adopting as record data is possible.

[0026] Next, the automatic managerial system by this 1 operation gestalt which has above-mentioned IC card 10 and above-mentioned reader writer equipment 20 is explained. The block configuration of this automatic managerial system is shown in drawing 3 .

[0027] As shown in drawing 3 , in the automatic managerial system 100 by this 1 operation gestalt, the host computer 101 is connected to Local Area Network (LAN) 103 through the input/output interface 102.

[0028] Two or more terminal units 104,105 are connected to LAN103. Telephones 104a and 105a, the facsimile transmitter-receivers 104b and 105b, and the reader writer equipments 104c and 105c of IC card 10 are connected to these terminal units 104,105.

[0029] The slot (not shown) which can insert IC card 10 is prepared in the reader writer equipments 104c and 105c of these, and it is constituted by inserting IC card 10 in this slot possible [read-out of the record data recorded on IC card 10].

[0030] Moreover, the host computer 101 is connected to the public networks 107, such as the telephone line, through the interface 106 of USB, RS232C, or IEEE1394.

[0031] And Telephones 104a and 105a and the facsimile transmitter-receivers 104b and 105b which were connected to the terminal unit 104,105 are connected to the external public network 107 through

h   c   g   cg b   eb cg   e   e

LAN103 and a host computer 101 one by one. Thus, by minding a host computer 101 in the middle of a communicative path, use situations, such as use start time in Telephones 104a and 105a or the facsimile transmitter-receivers 104b and 105b and use end time, and utilization time computed from these, are managed with a host computer 101, and it becomes possible to total.

[0032] Moreover, as for the host computer 101, the automatic-vending-machine use information gathering means 109 is connected through the input/output interface 108. Moreover, the control section (neither is illustrated) in two or more automatic vending machines 110,111 is connected to this automatic-vending-machine use information gathering means 109. Moreover, the reader writer equipments 110a and 111a of IC card 10 are formed in each automatic vending machine 110,111, respectively.

[0033] The slot (neither is illustrated) which can insert IC card 10 is prepared in these reader writer equipments 110a and 111a. And it is constituted by inserting IC card 10 in this slot possible [read-out of the record data recorded on IC card 10]. Moreover, each reader writer equipment 110a and 111a is constituted always possible [transmission and reception] with the host computer 101, respectively.

[0034] And in case an automatic vending machine 110,111 is used, the record data recorded on IC card 10 are first read by inserting IC card 10 in an above-mentioned slot. A host computer 101 and IC card 10 will transmit and receive record data through the reader writer equipments 110a and 111a, and are constituted after reading of this record data possible [activation of the accounting of the purchase price accompanying the purchase of the goods in an automatic vending machine 110,111].

[0035] Moreover, the elevator control means 113 is connected to the host computer 101 through the input/output interface 112. It connects with the drive circuit (neither is illustrated) of the elevator elevator 114,115, and the elevator control means 113 is constituted controllable in rise-and-fall actuation of the elevator elevator 114,115.

[0036] Moreover, while the IC card sensors 114a and 115a are installed in each elevator elevator 114,115, the same IC card sensor (not shown) is installed in the closing motion door of each story which gets on and off the elevator elevator 114,115.

[0037] The IC card sensor (not shown) installed in these IC card sensors 114a and 115a and the closing motion door of the elevator of each story is constituted so that record data can be communicated by IC card 10 and non-contact.

[0038] That is, a communication link non-contact between IC card 10 and the IC card sensors 114a and 115a and between IC card 10 and the IC card sensors near the closing motion door is performed only by the user who carried IC card 10 getting on and off to the elevator elevator 114,115.

[0039] It is the phase where the employee who carried IC card 10 specifically rode on the elevator elevator 114, and a communication link is first performed between IC cards 10 and IC card sensor 114a which the employee is carrying. And the record data of this user's IC card 10 are transmitted to a host computer 101. It enables this to manage the information of the user who is on the elevator elevator 114,115 with a host computer 101.

[0040] Moreover, the automatic door control means 117 is connected to the host computer 101 through the input/output interface 116. It connects with the drive circuit (neither is illustrated) of the automatic door 118,119 opened and closed prepared for the receipts and payments to the room, and the automatic door control means 117 is constituted controllable in the switching action of an automatic door 118,119.

[0041] Moreover, in each automatic door 118,119, the IC card sensors 118a and 119a are installed, and it constitutes record data from IC card 10 and non-contact possible [a communication link].

[0042] The employee who carried IC card 10 only specifically approaches in front of an automatic door 118, a communication link non-contact between IC card 10 and IC card sensor 118a is performed, and the record data of this employee's IC card 10 are transmitted to a host computer 101.

[0043] Then, the instruction signal of open actuation is transmitted to the automatic door control means 117 from a host computer 101. If the automatic door control means 117 receives this instruction signal, the instruction signal of open actuation is further transmitted to the drive circuit of an automatic door 118 by the automatic door control means 117, and an automatic door 118 can open.

[0044] Thus, by trying reading record data from an automatic door 118,119 with a host computer 101, it

h   c   g   cg b   eb cg e e

becomes possible to manage the user information on IC card 10 that the automatic door 118 was passed, with a host computer 101.

[0045] Moreover, the automatic reception system 121 and automatic entrance-into-a-room authorization equipment 122 are connected to the host computer 101 through the input/output interface 120.

[0046] The automatic reception system 121 is for publishing IC card 10 with the authority for coming into the building (henceforth, management building) managed by this automatic managerial system 100 to the employee who is not carrying IC card 10.

[0047] This automatic reception system 121 has fingerprint reader 121a and license reader 121b, and is constituted. And ready-for-sending ability constitutes fingerprint image information data and license number data from these fingerprint reader 121a and license reader 121b to the host computer 101, respectively.

[0048] And the information processing section of a host computer 101 performs database retrieval application installed. The information processing section can search the IC card user database mentioned later based on fingerprint image information data and license number data which were received by this activation, and the data file containing the data corresponding to these fingerprint image information data or license number data can be ****(ed).

[0049] Moreover, automatic entrance-into-a-room authorization equipment 122 is for publishing IC card 10 with authority to the visitor person who receives the person in charge engaged in a management building. And it is constituted possible [issue of IC card 10 for visitor persons] by operating this automatic entrance-into-a-room authorization equipment 122 from the terminal unit 104,105 which an employee uses.

[0050] In this automatic entrance-into-a-room authorization equipment 122, image pick-up equipment 122a and head set 122b are prepared. And a visitor person is photoed by image pick-up equipment 122a, image pick-up data are created, this image pick-up data is transmitted to a host computer 101, and it transmits to the terminal unit of the person in charge who receives further. The person in charge who receives is specified when a visitor person contacts a person in charge using head set 122b.

[0051] And when the transmitted image data is displayed on a terminal unit and a person in charge looks at this, the visitor person in front of the door checks that he is the partner who surely gave the person in charge a convention. In the phase whose the check of this was completed, a person in charge transmits information to automatic entrance-into-a-room authorization equipment 122 by operating a terminal unit 104,105, and issue of IC card 10 is performed here.

[0052] Moreover, the block diagram of the system configuration of the host computer 101 mentioned above is shown in drawing 4 . As shown in drawing 4 , in the host computer 101 by this 1 operation gestalt, it has the secondary memory means 203 recorded on a bus 201 by electromagnetic operation of the information processing section 202 which has CPU(arithmetic-and-program-control, Central Processing Unit)202a and memory 202b centering on this CPU202a, a hard disk (HD), etc. In addition, a bus 201 is for performing a data transfer between each circuit connected by this.

[0053] Moreover, software, such as an operating system which is a program for making a host computer 101 perform predetermined processing, and a facsimile communications program, a telephone communications program mentioned later, is installed in the secondary memory means 203.

[0054] And in case processing according to such software is performed, memory 202b of the information processing section 202 memorizes, and it once performs from CPU202a. Moreover, the information data of the user of IC card 10 are stored in this secondary memory means 203 as an IC card user database 204.

[0055] Here, the IC card user database 204 stored in the secondary memory means 203 of this host computer 101 is explained. The data of the IC card user database 204 by this 1 operation gestalt are shown in drawing 5 .

[0056] As shown in drawing 5 , each data file 300 of the IC card user database 204 is matched with each user for every user of IC card 10. Moreover, these data files 300 are sorted by for example, the personnel CD, and are stored in the secondary memory means 203 of a host computer 101.

[0057] The item CD as the record data memorized by the IC section 13 of IC card 10 with these same

h   c   g   cg b   eb cg e e

data files 300, i.e., personnel, Affiliation CD, department and section CD, name data, birth date data, address data, license number data, insurance certificate number data, fingerprint image data, executive priority data, and in-and-out authorization condition data are recorded.

[0058] Moreover, in addition to above-mentioned record data, the ON appearance time of day to the building of the user of IC card 10, office hours and the beginning-of-using time of day of a terminal unit 104, use end time, a time, the operating condition of telephone 104a, the operating condition of facsimile transmitter-receiver 104b, the use situation of a copying machine, the total amount of accounting accompanying use of an automatic vending machine, etc. are recorded on these data files 300.

[0059] Moreover, as shown in drawing 4 , in a host computer 101, the database retrieval application installed in the secondary memory means 203 is always started, and the information processing section 202 can always search now the IC card user database 204.

[0060] Moreover, in the host computer 101, the IC card data receiving agent installed in the secondary memory means 203 is always started. And the information processing section 202 is constituted by performing this receiving agent and database retrieval application possible [a comparison of the record data of IC card 10, and the data file 300 of the IC card user database 204].

[0061] Moreover, while the display means 205 is connected, the input means 206 which consists of pointing devices, such as a keyboard and a mouse (neither is illustrated), etc. is connected to the bus 201.

[0062] Furthermore, the bus 201 in this host computer 101 is connected to Local Area Network (LAN) 103 shown in drawing 3 through the input/output interface 102. Similarly, the bus 201 is connected to the public network 107 shown in drawing 3 through the interface of USB, RS232C, or IEEE1394.

[0063] Moreover, the bus 201 is connected to the automatic-vending-machine use information gathering means 109, the elevator control means 113, and the automatic door control means 117 through each input/output interface 108,112,116, respectively. Thereby, these automatic-vending-machine use information gathering means 109, the elevator control means 113, and the automatic door control means 117 constitute the instruction signal from the information processing section 202 at ready-for-sending ability.

[0064] The automatic managerial system 100 according to this 1 operation gestalt as mentioned above is constituted. And it is constituted so that the employee who carried IC card 10 in the management building where management by this automatic managerial system 100 is performed can always be managed.

[0065] Next, the management method by the automatic managerial system 100 constituted as mentioned above is explained, giving an example.

[0066] That is, if the employee who carried IC card 10 by this 1 operation gestalt comes to office, it will approach first in front of the automatic door 118 prepared in the door of a firm. At this time, the record data of an employee's IC card 10 are read by IC card sensor 118a of an automatic door 118.

[0067] IC card sensor 118a which read record data transmits record data to a host computer 101. Thereby, the information processing section 202 of a host computer 101 receives and recognizes the record data of IC card 10 of the employee who approached in front of the automatic door 118 of the door.

[0068] Then, the information processing section 202 searches whether according to the database retrieval application currently performed, the data file 300 corresponding to the received record data exists.

[0069] When the data file 300 which agrees to the received record data as a result of this retrieval exists, the information processing section 202 records the time of day when the record data of this employee's IC card 10 were read by IC card sensor 118a at, and were transmitted to the information processing section 202 on the item of the entrance time of day of the data file 300 corresponding to this employee. This becomes possible to record the ingress time of day into an employee's management building.

[0070] Moreover, the information processing section 202 of a host computer 101 transmits the instruction signal which directs open actuation of an automatic door 118 to the automatic door control

h   c   g   cg b   eb cg e e

means 117 by one side.

[0071] The automatic door control means 117 which received the instruction signal which directs open actuation of an automatic door 118 transmits the instruction signal of open actuation to the mechanical component of an automatic door 118. The employee who the automatic door 118 could open and carried IC card 10 by this can pass through this door.

[0072] On the other hand, when the corresponding data file 300 does not exist as a result of retrieval of the IC card user database 204, the instruction signal which maintains a closed state from the information processing section 202 of a host computer 101 is transmitted to the automatic door 118 of the door. It can prevent that those who are not recorded on the IC card user database 204 enter into a management building by this.

[0073] Moreover, even if it approaches the door about those (non-carried person) who are not carrying IC card 10, IC card sensor 118a cannot read IC card 10. Therefore, since record data etc. are not transmitted to a host computer 101, the instruction signal of open actuation is not transmitted to the automatic door control means 117 from the information processing section 202 of a host computer 101. Since an automatic door 118 is not opened by this, the ingress into the building of the non-carried person of IC card 10 is prevented.

[0074] In addition, in spite of having the authority to enter into a building, originally, IC card 10 with authority is published by the automatic reception system 121 installed in the door for the reason of leaving IC card 10 in a house in the employee who does not get ingress into a building.

[0075] That is, a non-carried person makes fingerprint reader 121a or license reader 121b prepared in the automatic reception system 121 read an own fingerprint or an own license. And this image data and license number data of a fingerprint that were read are transmitted to the information processing section 202 of a host computer 101.

[0076] The information processing section 202 which received these data **** the data file 300 whose item of this fingerprint image data or license number data corresponds from the IC card user database 204, and transmits to the automatic reception system 121.

[0077] The automatic reception system 121 which received the data file 300 builds the flag which sets up duration of service while writing the data of the part applicable to the individual humanity news of this data file 300 in new IC card 10.

[0078] That is, after the period (for example, 24 hours) which set up this IC card 10 in distinction from IC card 10 of other normal passes, it is entirely made unusable. Thus, the unauthorized use of IC card 10 can be prevented by making IC card 10 unusable after fixed period progress.

[0079] Then, when the employee who carried IC card 10 enters into a building, this employee uses an elevator and this employee approaches the closing motion door of an elevator, the information in an IC card is read by the IC card sensors 114a and 115a formed near the closing motion door of an elevator. And the record data of this IC card 10 are transmitted to the information processing section 202 of a host computer 101.

[0080] The information processing section 202 of a host computer 101 which received record data transmits the information data of the story in which this employee is to the elevator control means 113. The elevator control means 113 moves this information data with reception to the story in which an employee's elevator elevator 114 is, and opens a closing motion door.

[0081] And the information processing section 202 of a host computer 101 **** the data file 300 which is in agreement with the record data which searched the IC card user database 204 and were received in the phase in which this employee got in the elevator elevator 114.

[0082] Then, you extract "Affiliation CD" and "department and section CD" from the ****(ed) data file 300, make it go up and down an elevator, it is made to stop on the story of the department and section to which the employee who showed up in this elevator belongs, and a closing motion door is opened.

[0083] In addition, when other employees have got into [the elevator elevator 114] in the phase in which this employee got in, the information processing section 202 of a host computer 101 extracts the "executive priority" of a data file 300 further. And the information processing section 202 judges synthetically "Affiliation CD", "department and section CD", and "executive priority" about all the

h   c   g   cg b   eb cg e e

employees that have boarded into the elevator elevator 114.

[0084] By this decision, I stop by the rank of the high order of priority, or it announces it that I have the low person of priority get down in the case of no vacancy "to get down, since it is Mr. OO and no vacancy" etc.

[0085] In addition, when the employee who got in the elevator elevator 114 wants to get down on stories other than a story with the department and section to which he belongs, a stopped rank is transmitted by [to which a menu screen key and a ten key operate it, for example] having been added to the cellular phone. The data of this halt rank are transmitted to the information processing section 202 of a host computer 101 through the public network 107.

[0086] The information processing section 202 which received this halt rank transmits the data of halt rank to the elevator control means 113, and stops the elevator elevator 114 in this halt rank.

[0087] After the employee who got in the elevator elevator 114 gets down from the elevator elevator 114 on a story with the department and section to which he belongs, or a desired story, the room of affiliation department and section is entered. Then, this employee inserts IC card 10 in the slot of reader writer equipment 104c prepared in the terminal unit 104 on its own desk.

[0088] After IC card 10 is inserted in a slot, the record data of IC card 10 are read by reader writer equipment 104c, and it is transmitted to the information processing section 202 of a host computer 101.

[0089] The information processing section 202 which received record data **** the data file 300 applicable to the record data of this IC card 10 from the IC card user database 204.

[0090] And the information processing section 202 judges whether the pocket person of this IC card 10 has use authority about the terminal unit 104 with which this reader writer equipment 104c is attached.

[0091] When the pocket person of this IC card 10 does not have use authority as a result of this decision, it is made not to transmit all instruction signals towards reader writer equipment 104c of a terminal unit 104. By not transmitting this instruction signal, the employee who a terminal unit 104 will be in the condition that it cannot be made to start, and does not have authority can prevent using the predetermined terminal unit 104.

[0092] On the other hand, when there is use authority, while transmitting the instruction signal which directs starting **** to reader writer equipment 104c which read record data, the time of day which started the terminal unit 104 is recorded on the item of the terminal beginning-of-using time of day of this ****(ed) data file 300.

[0093] Reader writer equipment 104c which received the instruction signal turns on a terminal unit 104, telephone 104a, and facsimile transmitter-receiver 104b, and makes these an usable condition. Then, when an employee starts a terminal unit 104, this employee becomes usable about a terminal unit 104.

[0094] Moreover, when using telephone 104a and facsimile transmitter-receiver 104b, message start time and message end time are recorded on the item of the "telephone use situation" of a data file 300, and a "facsimile terminal use situation" by the information processing section 202 of a host computer 101 with the usual telephone or use of a facsimile terminal.

[0095] Moreover, in case a copying machine is used, by inserting IC card 10 in the reader writer equipment of a copying machine, a copying machine will be in an available condition and the use time of day of the copying machine of the employee who is carrying IC card 10 will be similarly recorded on this employee's data file 300 in further above-mentioned telephone 104a or facsimile transmitter-receiver 104b.

[0096] Moreover, when this employee purchases a can drink etc. using the automatic vending machine 110 in a management building, IC card 10 is first inserted in the slot of reader writer equipment 110a in which it was prepared by the automatic vending machine 110. Then, this employee purchases desired goods. With this, the record data and use amount-of-money data of IC card 10 are transmitted to the automatic-vending-machine use information gathering means 109.

[0097] Then, these record data and use amount-of-money data are transmitted to the information processing section 202 of a host computer 101 from this automatic-vending-machine use information gathering means 109. The information processing section 202 which received these data **** the data file 300 which corresponds from the IC card user database 204, and records the new amount-of-money

h   c   g   cg b   eb cg e e

data which added use amount-of-money data to the amount-of-money data in the item of the "automatic-vending-machine use amount of money" in this data file 300.

[0098] In addition, the amount-of-money data in the item of this "automatic-vending-machine use amount of money" are continuously added through the count period of a salary, are used for salary count in the phase which the count period of a salary passed, and are again added from 0 after that.

[0099] Moreover, when an employee comes from a management building outside, the automatic door 118 of the door etc. is passed. At this time, the time of day when leaving is recorded on the "leaving time of day" of an employee's data file 300 when the IC card user database 204 corresponds like the case where it enters into the management building mentioned above. Then, when this employee enters into a management building again, the time of day which entered the "entrance time of day" of a data file 300 is recorded similarly.

[0100] And such "entrance time of day" and "leaving time of day", and current time of day are always calculated by the information processing section 202 of a host computer 101, and the mail which requires the publication of a going-out statement of reasons etc. is transmitted if needed.

[0101] It is the phase which carried out predetermined time progress from "leaving time of day", for example, the phase which passed 60 minutes or more, and when "entrance time of day" is not recorded on an employee's data file 300, specifically, the information processing section 202 of a host computer 101 presumes the employee "went out."

[0102] If "going out" is presumed by the information processing section 202, the information processing section 202 of a host computer 101 will transmit the electronic mail to which the publication of a statement of reasons is urged to the terminal unit 104 of this corresponding employee. And management of predetermined diligence and indolence is judged by the reply result of a next electronic mail.

[0103] Moreover, about going home of an employee, all the cases where it is recorded at the "leaving time of day" of an employee's data file after 5:30 p.m. are presumed to be going home in the information processing section 202 of a host computer 101. and the phase where predetermined time passed in leaving after 5:30 p.m. -- for example, even if it passes for 60 minutes, it is made not to transmit an electronic mail

[0104] In addition, when the time of day which entered a room again and entered "entrance time of day" is recorded after the time of day which the employee left after 5:30 p.m. and left at the "leaving time of day" of an employee's data file 300 was recorded, let the latest time of the leaving time of day recorded after this entrance time of day be leaving time of day.

[0105] As mentioned above, the information processing section 202 of a host computer 101 enables it to manage diligence-and-indolence management of an employee at any time by recording "entrance time of day" and "leaving time of day" on an employee's data file 300 timely.

[0106] That is, the information processing section 202 of a host computer 101 enables it to provide with such diligence-and-indolence information the terminal unit 105 of the affiliation length of department and section with which this employee belongs from the information processing section 202 of a host computer 101 at any time, when overtime work is likely to be against Labor Standard Law mostly, or when there are much lateness and absence. By this, affiliation length becomes possible [reducing sharply the effort which management of an employee takes].

[0107] Moreover, it is also possible to add further the so-called skill information, such as an experience type of industry about an employee individual, devotion business and the years of experience of these work, and devotion years, to the record data of IC card 10 and the data file 300 of the IC card user database 204.

[0108] Thus, in a certain department and section, it is urgent by adding skill information to IC card 10, and when a staff is needed, it becomes possible by retrieving such skill information to elect an auxiliary staff easily.

[0109] Automatic management using the automatic managerial system according to this 1 operation gestalt as mentioned above is performed.

[0110] As mentioned above, although 1 operation gestalt of this invention was explained concretely, this invention is not limited to 1 above-mentioned operation gestalt, and various kinds of deformation based

h   c   g   cg b   eb cg   e   e

on the technical thought of this invention is possible for it.

[0111] For example, it may not pass over the item of the data file mentioned in 1 above-mentioned operation gestalt, the item of skill information, and the whole automatic managerial system configuration for an example to the last, but the item of a data file different if needed from this, the item of skill information, and the whole automatic managerial system configuration may be used.

[Translation done.]

h   c   g   cg b   eb cg e e

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the abbreviation diagram and sectional view showing an example of the IC card used for the automatic managerial system by 1 operation gestalt of this invention.
[Drawing 2] It is the block diagram showing the system configuration of an IC card, and the IC card sensor and reader writer equipment which are used for the automatic managerial system by 1 operation gestalt of this invention.
[Drawing 3] It is the block diagram showing the configuration of the automatic managerial system by 1 operation gestalt of this invention.
[Drawing 4] It is the block diagram showing the system configuration of the main computer of the automatic managerial system by 1 operation gestalt of this invention.
[Drawing 5] It is the abbreviation diagram showing the database stored in the auxiliary storage unit of the main computer by 1 operation gestalt of this invention.
[Description of Notations]
10 ... IC card
11 ... Substrate
12 21 ... Antenna coil
13 ... The IC section
14 ... Electronic parts
15 ... Cell
16 ... Closure resin
17 ... Body of a card
18 ... Seal
20 ... Reader writer equipment
22 ... Power sending circuit
23 ... Modulation demodulator circuit
24 ... Read/write control circuit
100 ... Automatic managerial system
101 ... Host computer
102 ... Input/output interface
104,105 ... Terminal unit
104a, 105a ... Telephone
104b, 105b ... Facsimile transmitter-receiver
104c, 105c, 110a, 111a ... Reader writer equipment
106 ... Interface
107 ... Public network
108,112,116,120 ... Input/output interface
109 ... Automatic-vending-machine use information gathering means
110,111 ... Automatic vending machine

h   c   g   cg b   eb cg e e

113 ... Elevator control means
114,115 ... Elevator elevator
114a, 115a, 118a, 119a ... IC card sensor
117 ... Automatic door control means
118,119 ... Automatic door
121 ... Automatic reception system
121a ... Fingerprint reader
121b ... License reader
122 ... Automatic entrance-into-a-room authorization equipment
122a ... Image pick-up equipment
122b ... Head set
201 ... Bus
202 ... Information processing section
202 a...CPU
202b ... Memory
203 ... Secondary memory means
204 ... IC card user database
205 ... Display means
206 ... Input means
300 ... Data file

[Translation done.]

h   c   g   cg b   eb cg e e